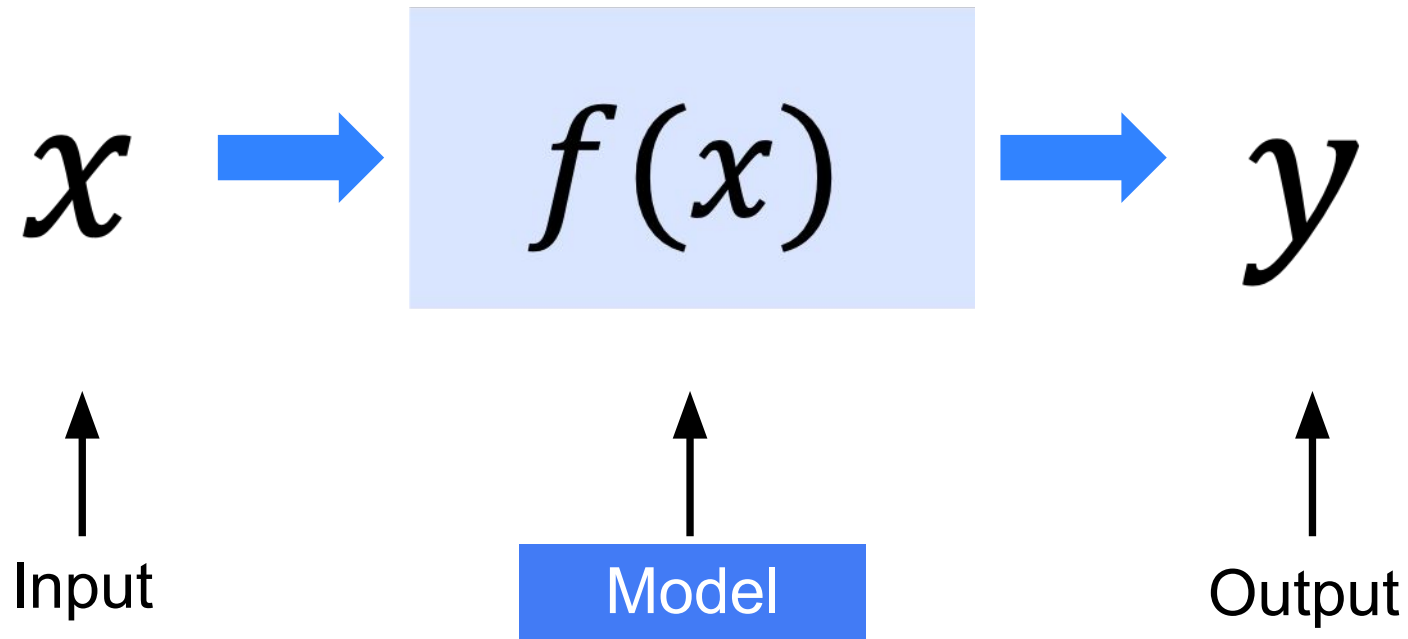


```
94     if (strlen($hex_str) == 6) {
95         $color_val = hexdec($hex_str);
96         $rgb_array['r'] = 0xFF & ($color_val >> 0x10);
97         $rgb_array['g'] = 0xFF & ($color_val >> 0x8);
98         $rgb_array['b'] = 0xFF & $color_val;
99     } elseif (strlen($hex_str) == 3) {
100         $rgb_array['r'] = hexdec(str_repeat(substr($hex_str, 0, 1), 2));
101         $rgb_array['g'] = hexdec(str_repeat(substr($hex_str, 1, 1), 2));
102         $rgb_array['b'] = hexdec(str_repeat(substr($hex_str, 2, 1), 2));
103     } else {
104         return false;
105     }
106 }
107 }
108 // Draw
109
```

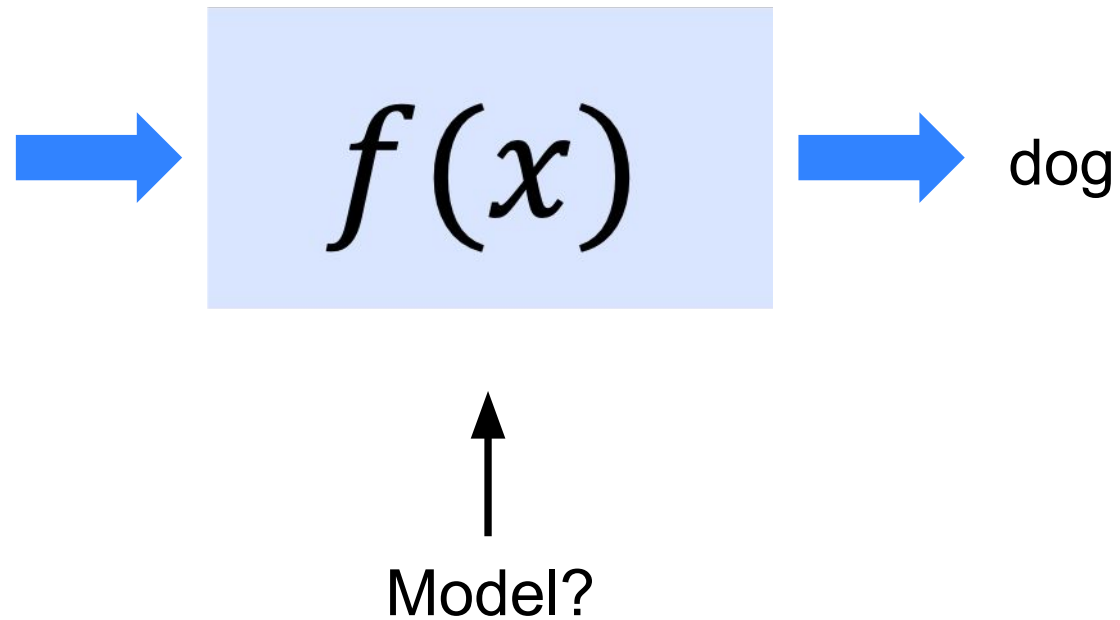
Inteligência Artificial: do Zero ao Infinito

Supervised vs. Unsupervised Learning

Introdução à Machine Learning



Introdução à Machine Learning



*object recognition

Tipos de Problemas de ML

O que podemos aprender apenas olhando os dados?

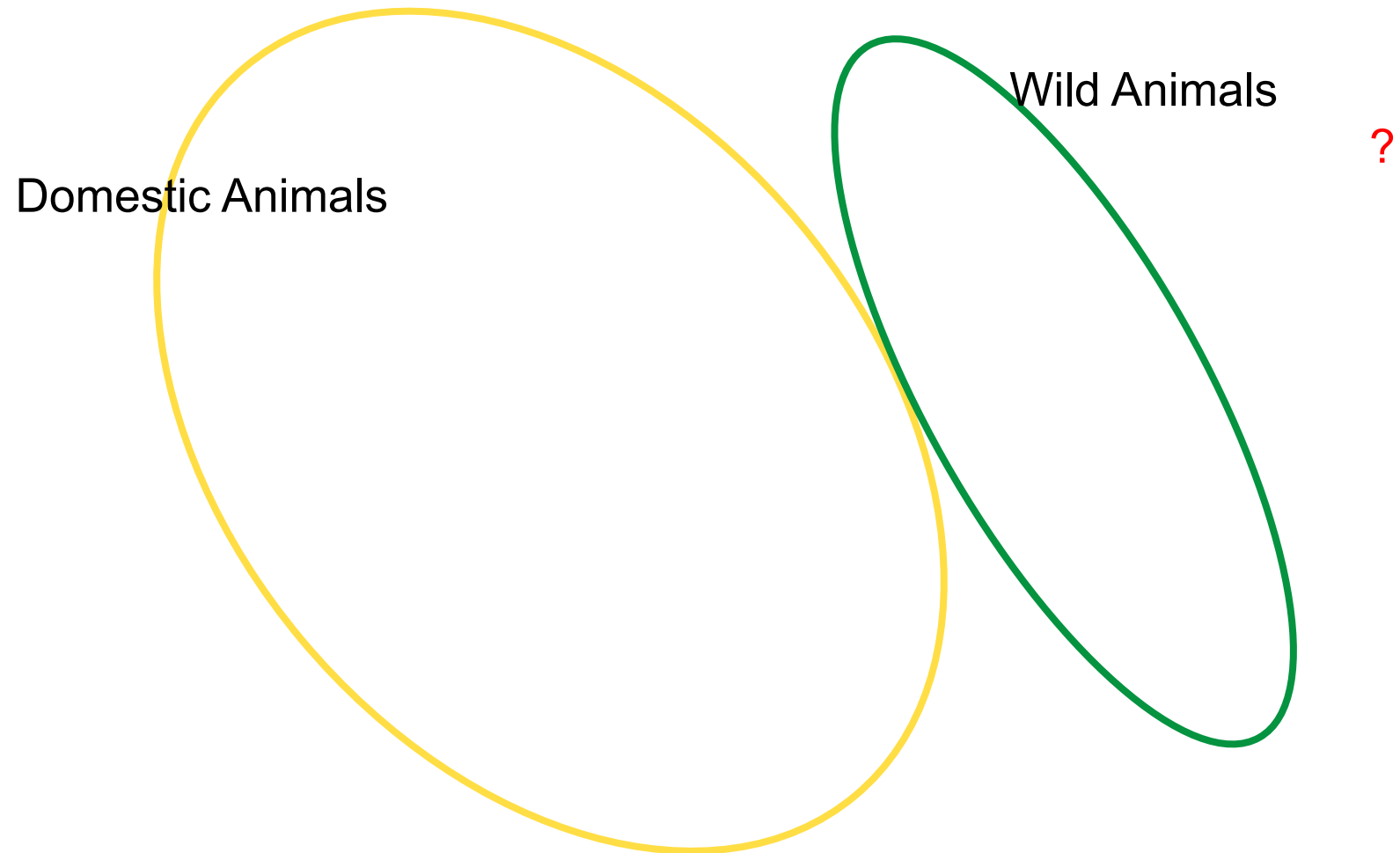
Tipos de Problemas de ML

O que podemos aprender apenas olhando os dados?



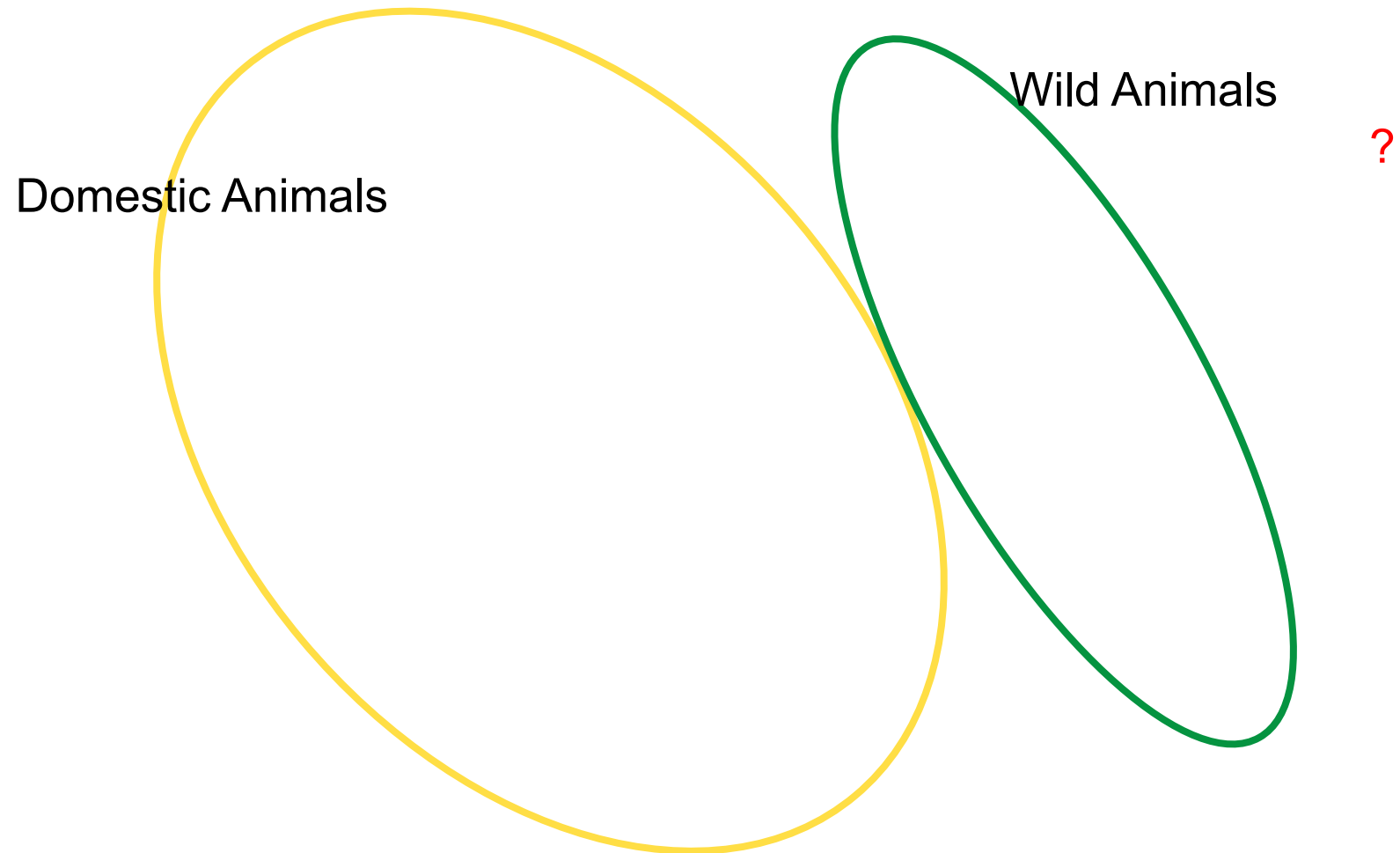
Tipos de Problemas de ML

O que podemos fazer com dados armazenados?



Tipos de Problemas de ML

O que podemos fazer com dados armazenados?



Estratégias de Aprendizado

Supervised
Learning

Unsupervised
Learning

Estratégias de Aprendizado

Supervised
Learning

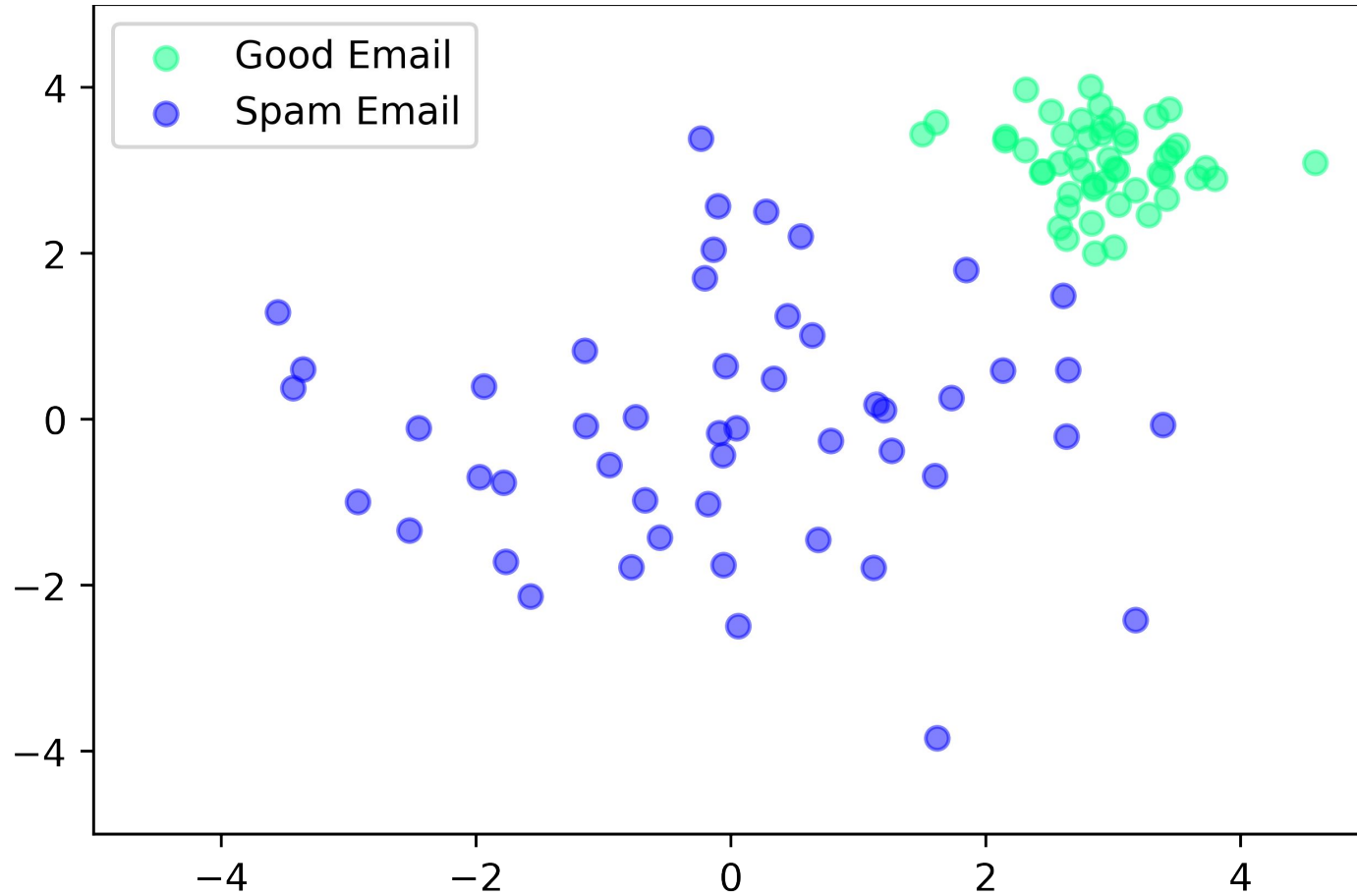
Unsupervised
Learning

Reinforcement
learning

Estratégias de Aprendizado

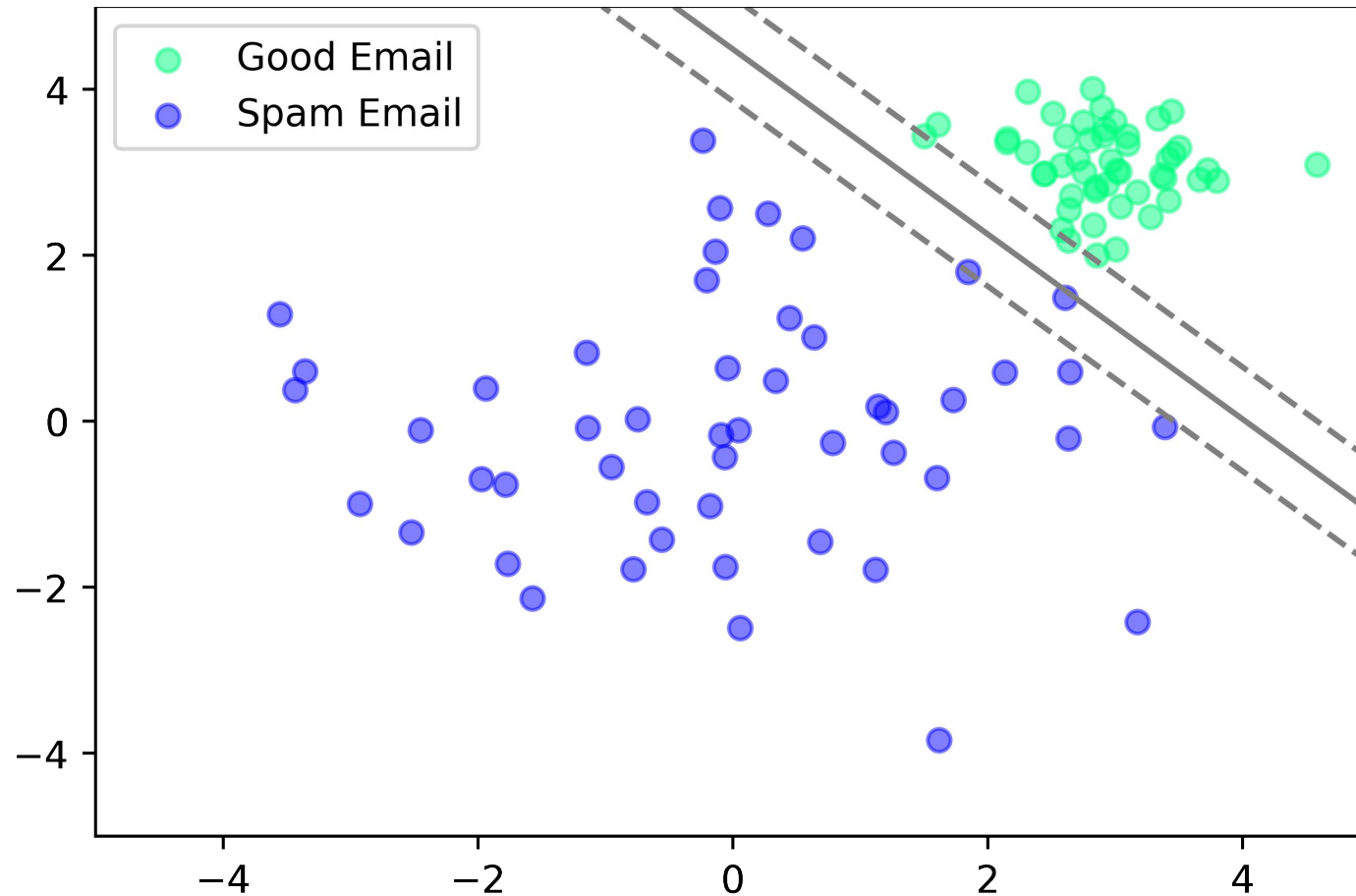
	Supervised Learning	Unsupervised Learning
Discrete	Classification or Categorization	Clustering
Continuous	Regression	Dimensionality reduction

Exemplo com SVM



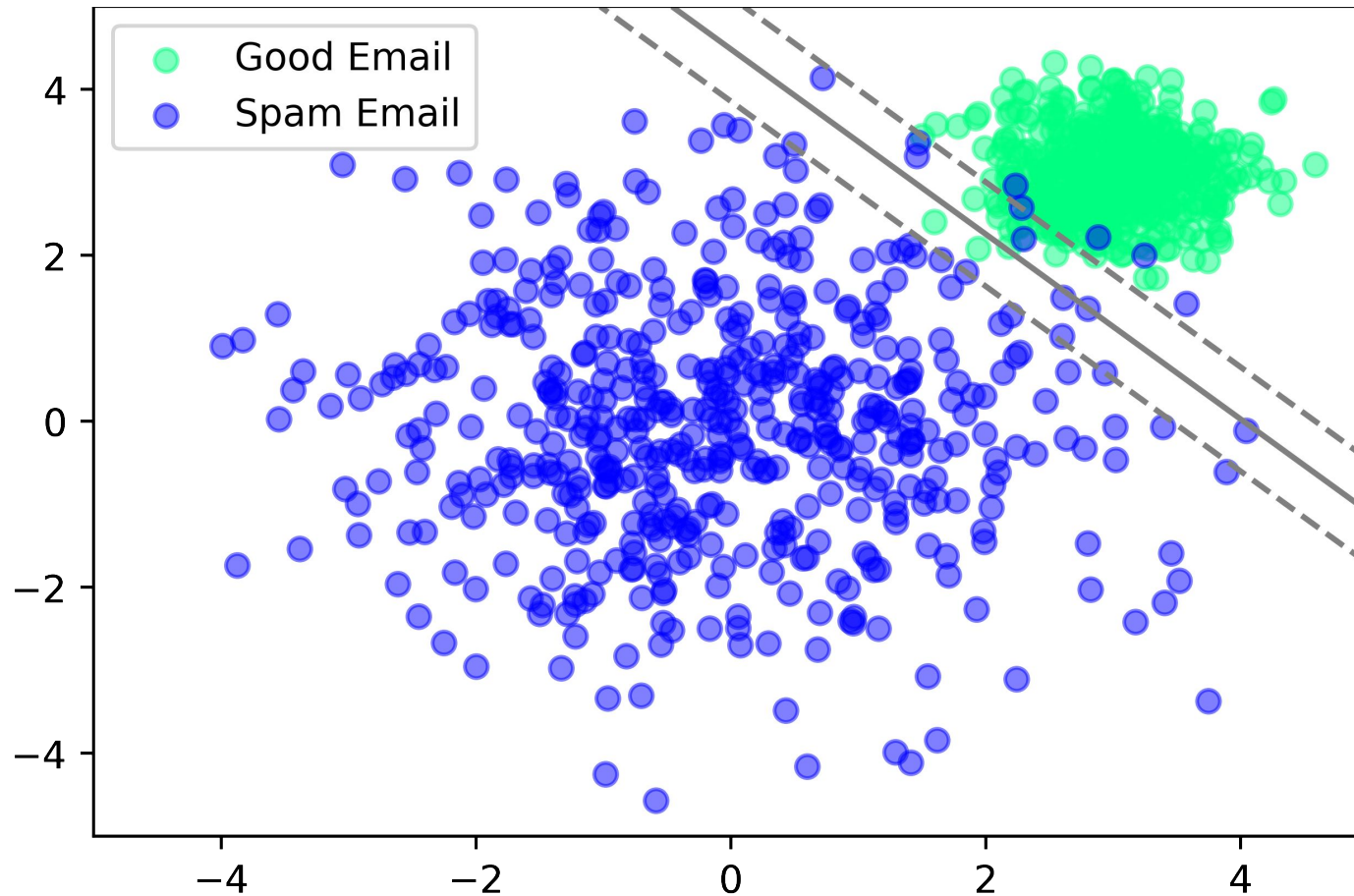
Supervised Learning

Exemplo com SVM

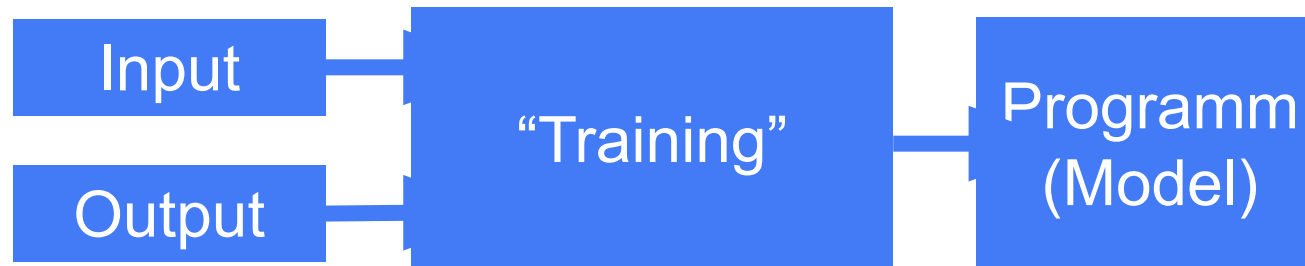


Supervised Learning

Exemplo com SVM



Supervised Learning



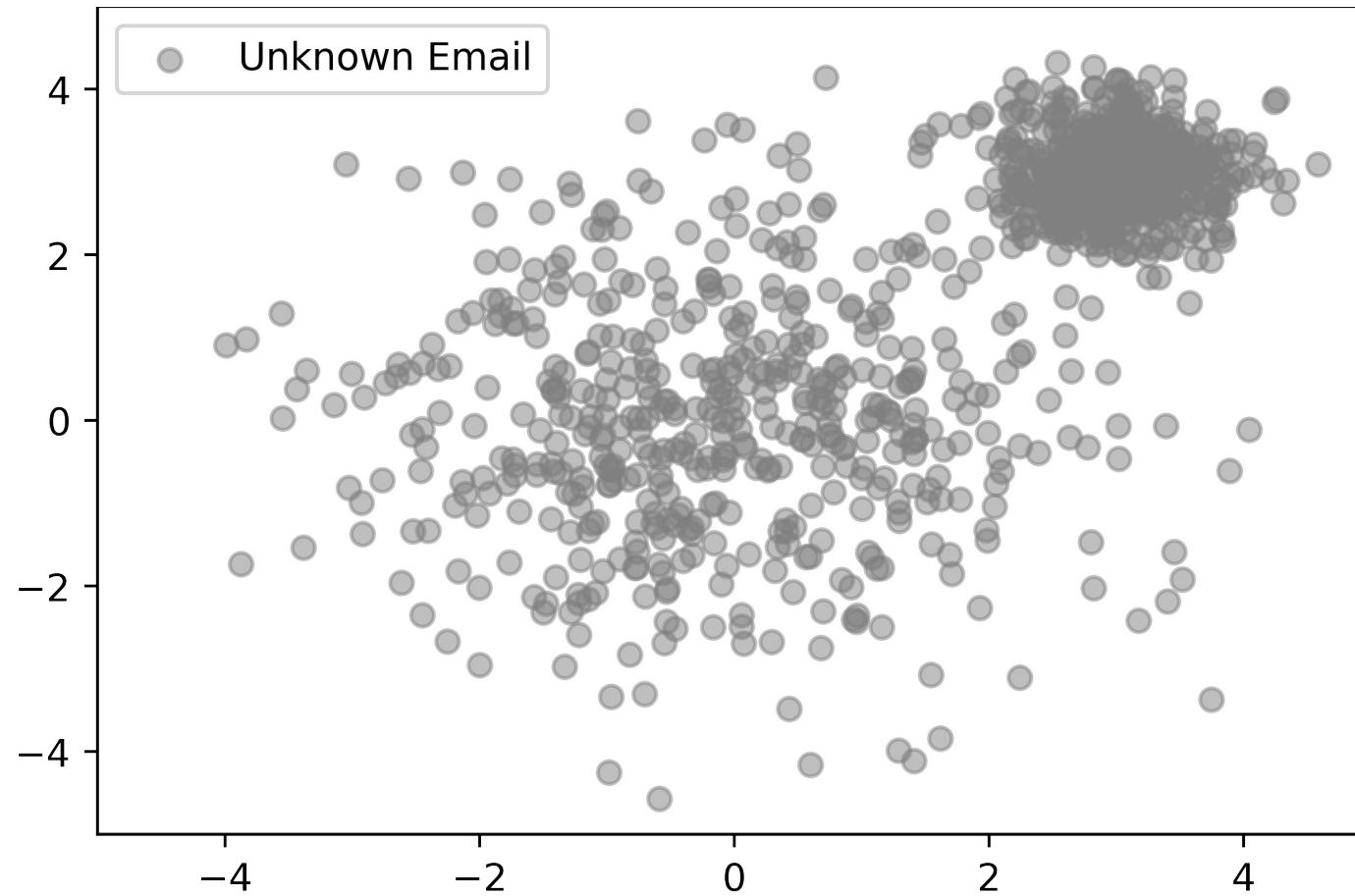
Supervised Learning

- Data

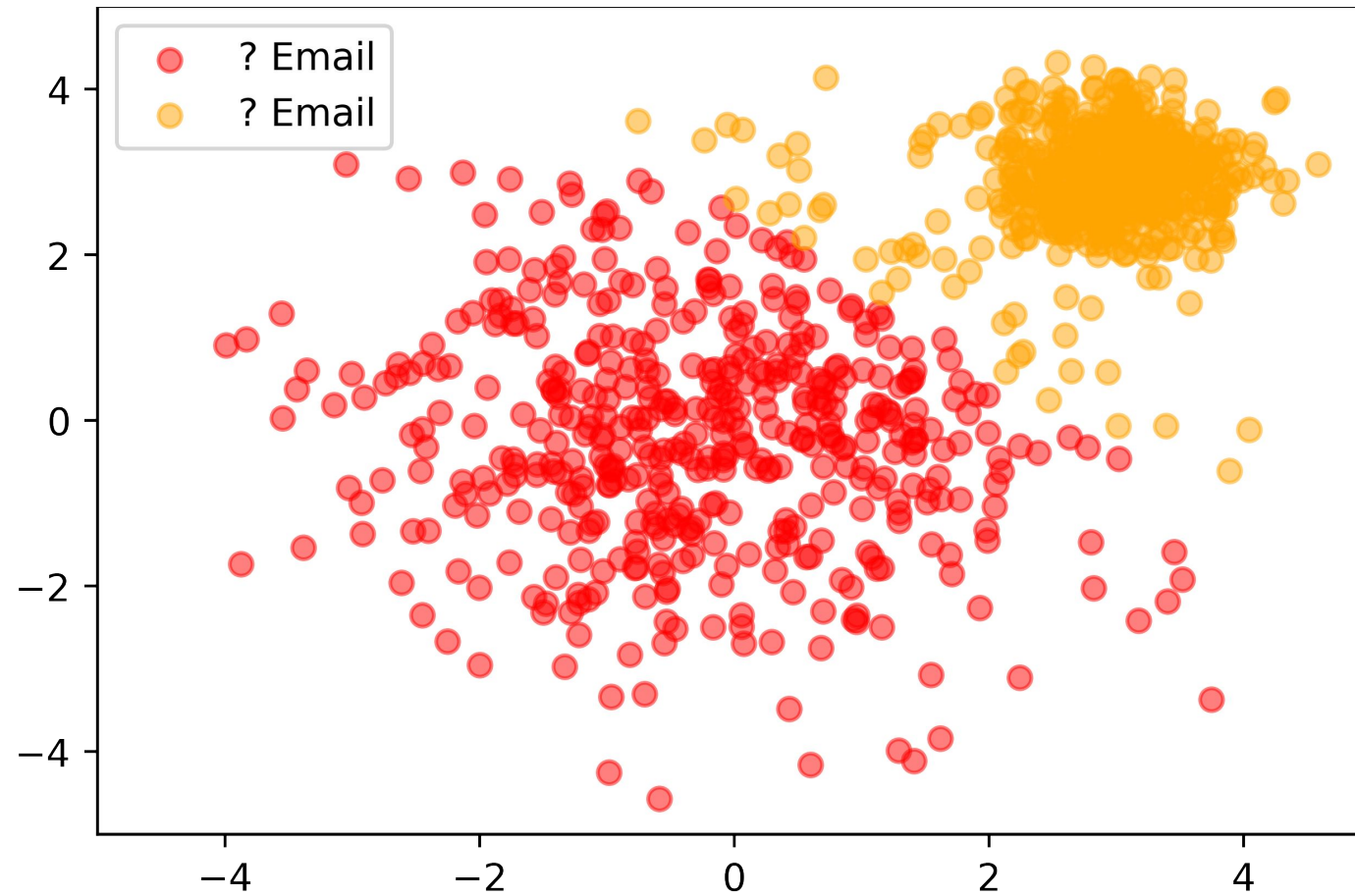


- Labels (Classes)
- Continues values

Unsupervised Learning

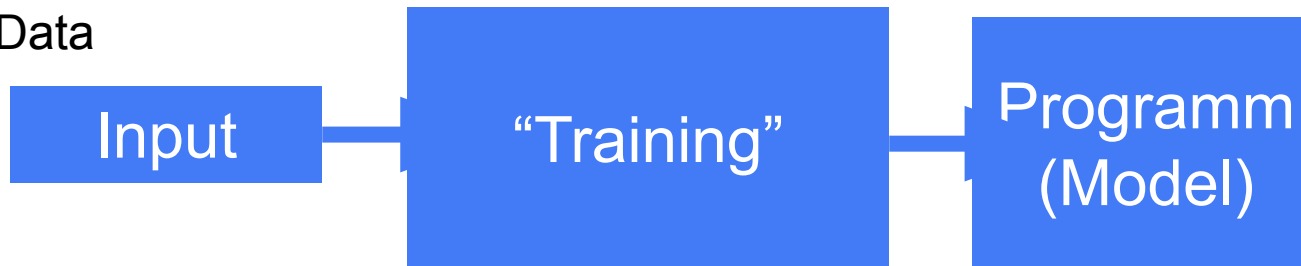


Unsupervised Learning



Unsupervised Learning

- Data



Not needed:

- Labels (Classes)
- Continues values

Estratégias de Aprendizado

	Supervised Learning	Unsupervised Learning
Discrete	Classification or Categorization	Clustering
Continuous	Regression	Dimensionality reduction

Conclusão

Supervised vs. Unsupervised Learning

- Unsupervised Learning
 - Dados não-rotulados
 - Utiliza os dados para descobrir padrões
- Supervised Learning
 - Dados rotulados
 - Usados para generalizar relações conhecidas entre a entrada e a saída

Referências

Supervised vs. Unsupervised Learning

- Página Pessoal: Sven Mayer
 - <https://sven-mayer.com/pml/index.html>

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